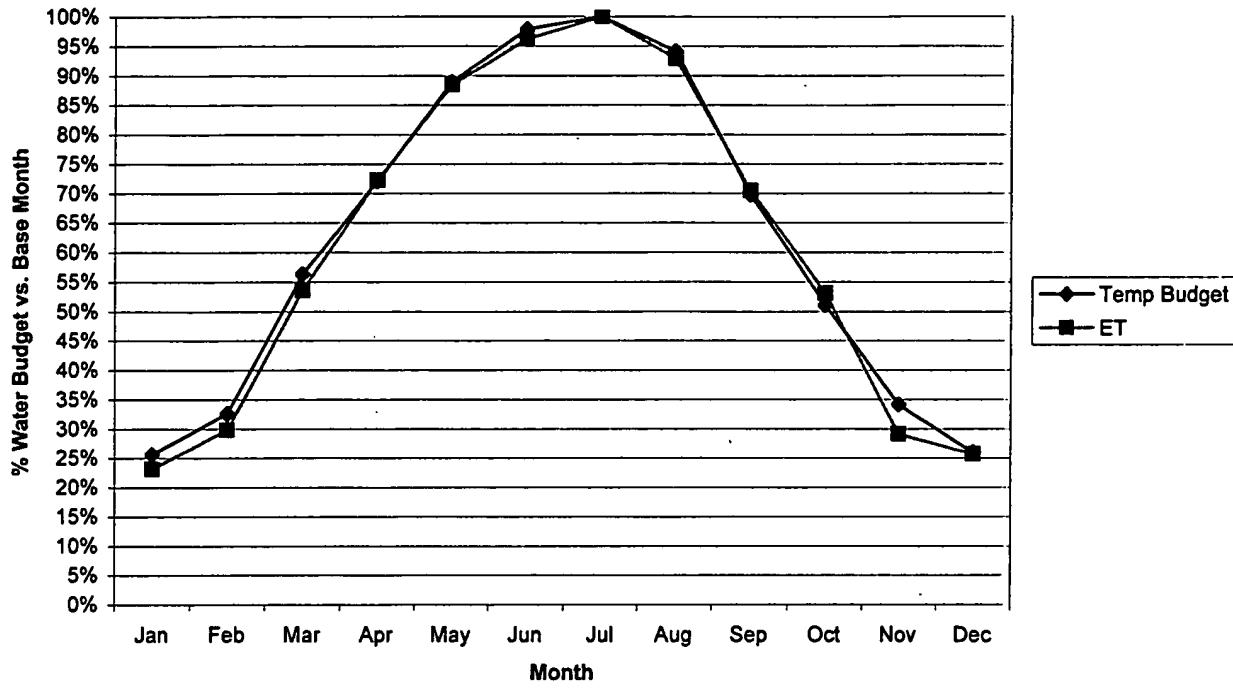


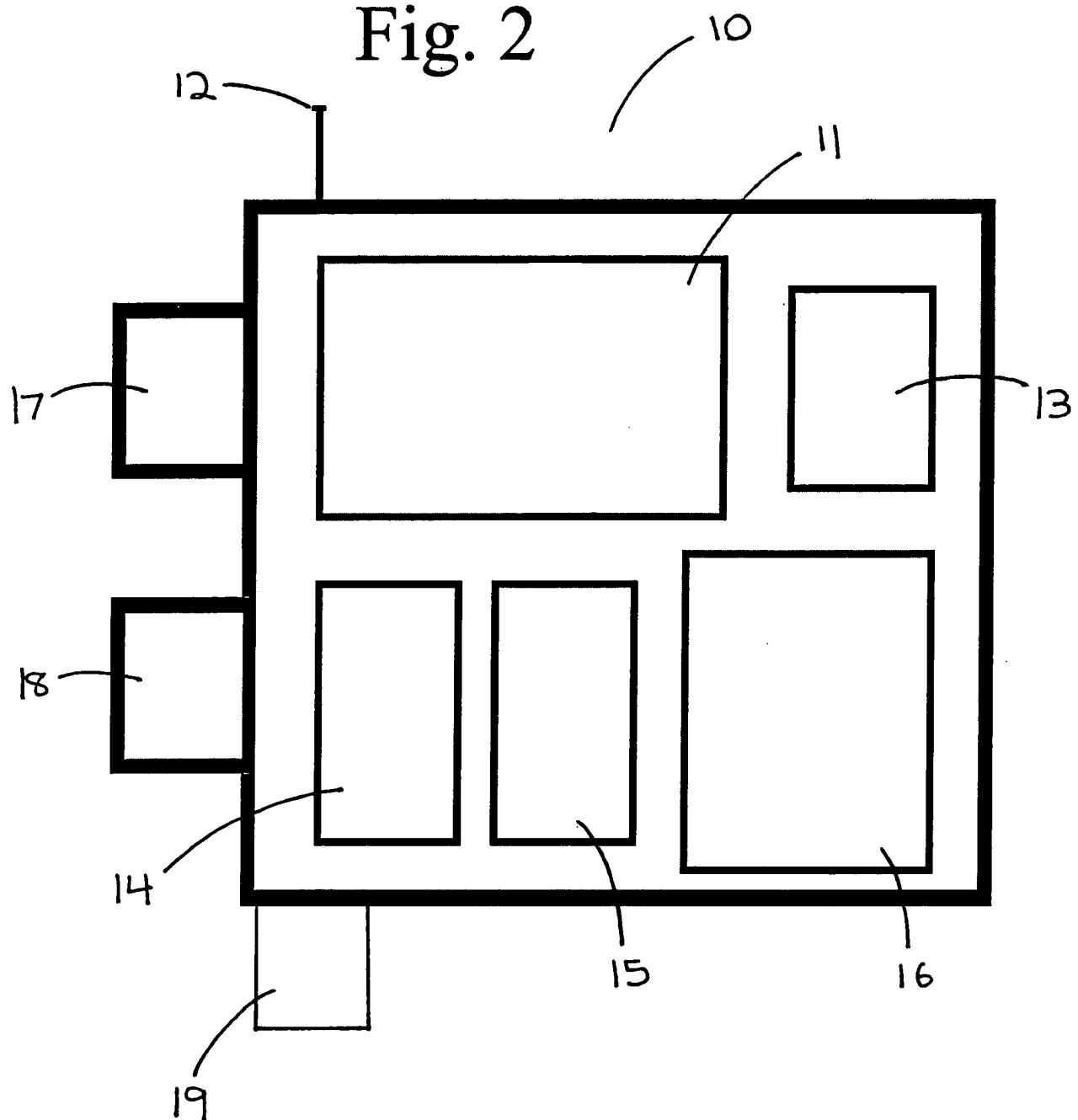
## TEMPERATURE VS. ET IRRIGATION BUDGET



Month	Temp Budget	ET
Jan	25.61%	23.18%
Feb	32.61%	29.82%
Mar	56.31%	53.62%
Apr	72.02%	72.23%
May	88.90%	88.47%
Jun	97.90%	96.19%
Jul	100.00%	100.00%
Aug	94.09%	92.93%
Sep	69.78%	70.39%
Oct	51.06%	53.07%
Nov	34.09%	29.09%
Dec	25.98%	25.67%

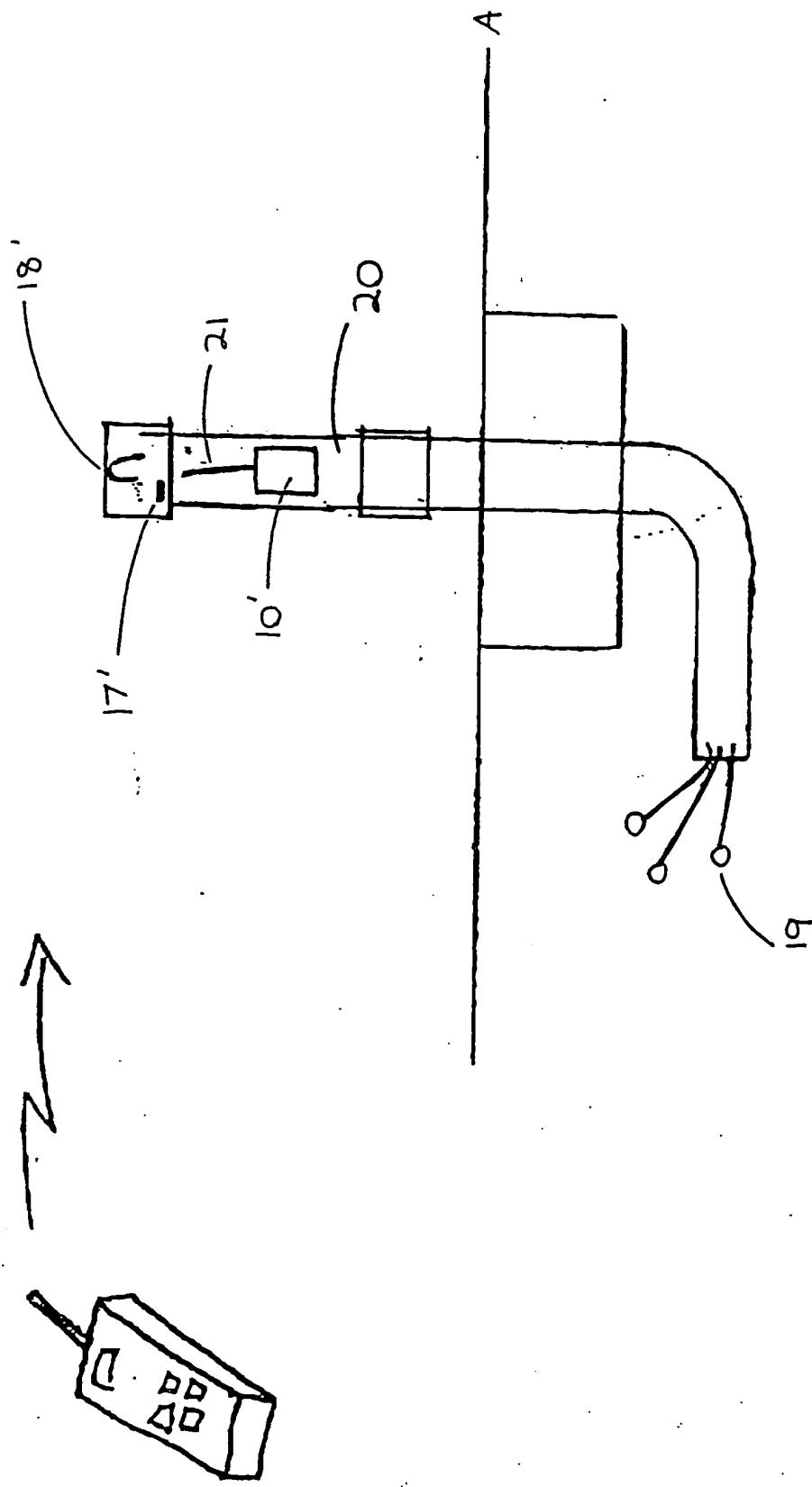
FIG. 1

Fig. 2



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FIG. 3



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FIG. 4

30 —

Operator Installs Irrigation Controller

31 — Operator attaches cutoff switch to existing irrigation system

32 — Operator installs temperature sensor within target geographical area

33 — (Optional) Operator installs precipitation sensor

40 —

Operator Configures Irrigation Controller

41 — Operator enters current time, date, month and year

42 — Operator enters expected summer high temperature and its date

43a/b — Operator enters latitude for geographical area or zip code

44 — Operator enters preliminary irrigation schedule

45 — (Optional) Operator enters minimum system activation temperature

50 —

Controller Calculates Summer Temperature Budget Factor (STBF)

51 — Obtain extraterrestrial radiation value from RA lookup table

52 — Determine STBF from average summer temperature and RA

60 —

Controller Calculates Periodic Temperature Budget Factor (PTBF)

61 — Record maximum temperature for the current period

62 — Determine RA for the current period

63 — Determine PTBF from periodic maximum temperature and RA

70 —

Controller Affects Preliminary Irrigation Schedule

71 — Calculate water budget ratio (WBR) from STBF and PTBF

72 — Adjust irrigation schedule by WBR

73 — Store adjusted irrigation schedule

80 —

Irrigation System Activation

81 — (Optional) Verify temperature is greater than minimum activation temperature

82 — (Optional) Verify lack of precipitation

83 — Activate adjusted irrigation schedule

**FIG. 5**

50

— Controller Calculates Summer Temperature Budget Factor (STBF)

51 — Obtain extraterrestrial radiation value from RA lookup table

52 — Determine STBF from average summer temperature and RA

60

— Controller Calculates Periodic Temperature Budget Factor (PTBF)

61 — Record maximum temperature for the current period

62 — Determine RA for the current period

63 — Determine PTBF from periodic maximum temperature and RA

70

— Controller Affects Preliminary Irrigation Schedule

71 — Calculate water budget ratio (WBR) from STBF and PTBF

72 — Adjust irrigation schedule by WBR

73 — Store adjusted irrigation schedule

80

— Irrigation System Activation

83 — Activate adjusted irrigation schedule

Extraterrestrial Radiation (RA) Expressed in Equivalent Evaporation (in mm/day)

January (1)	February (2)	March (3)	April (4)	May (5)	June (6)	July (7)	August (8)	September (9)	October (10)	November (11)	December (12)	Latitude (degrees) (13)
(a) Northern Hemisphere												
3.8	6.1	9.4	12.7	15.8	17.1	16.4	14.1	10.9	7.4	4.5	3.2	50
4.3	6.6	9.8	13.0	15.9	17.2	16.5	14.3	11.2	7.8	5.0	3.7	48
4.9	7.1	10.2	13.3	16.0	17.2	16.6	14.5	11.5	8.3	5.5	4.3	46
5.3	7.6	10.6	13.7	16.1	17.2	16.6	14.7	11.9	8.7	6.0	4.7	44
5.9	8.1	11.0	14.0	16.2	17.3	16.7	15.0	12.2	9.1	6.5	5.2	42
6.4	8.6	11.4	14.3	16.4	17.3	16.7	15.2	12.5	9.6	7.0	5.7	40
6.9	9.0	11.8	14.5	16.4	17.2	16.7	15.3	12.8	10.0	7.5	6.1	38
7.4	9.4	12.1	14.7	16.4	17.2	16.7	15.4	13.1	10.6	8.0	6.6	36
7.9	9.8	12.4	14.8	16.5	17.1	16.8	15.5	13.4	10.8	8.5	7.2	34
8.3	10.2	12.8	15.0	16.5	17.0	16.8	15.6	13.6	11.2	9.0	7.8	32
8.8	10.7	13.1	15.2	16.5	17.0	16.8	15.7	13.9	11.6	9.5	8.3	30
9.3	11.1	13.4	15.3	16.5	16.8	16.7	15.7	14.1	12.0	9.9	8.8	28
9.8	11.5	13.7	15.3	16.4	16.7	16.6	15.7	14.3	12.3	10.3	9.3	26
10.2	11.9	13.9	15.4	16.4	16.6	16.5	15.8	14.5	12.6	10.7	9.7	24
10.7	12.3	14.2	15.5	16.3	16.4	16.4	15.8	14.6	13.0	11.1	10.2	22
11.2	12.7	14.4	15.6	16.3	16.4	16.3	15.9	14.8	13.3	11.6	10.7	20
11.6	13.0	14.6	15.6	16.1	16.1	16.1	15.8	14.9	13.6	12.0	11.1	18
12.0	13.3	14.7	15.6	16.0	15.9	15.9	15.7	15.0	13.9	12.4	11.6	16
12.4	13.6	14.9	15.7	15.8	15.7	15.7	15.7	15.1	14.1	12.8	12.0	14
12.8	13.9	15.1	15.7	15.7	15.5	15.5	15.6	15.2	14.4	13.3	12.5	12
13.2	14.2	15.3	15.7	15.5	15.3	15.3	15.5	15.3	14.7	13.6	12.9	10
13.6	14.5	15.3	15.6	15.3	15.0	15.1	15.4	15.3	14.8	13.9	13.3	8
13.9	14.8	15.4	15.4	15.1	14.7	14.9	15.2	15.3	15.0	14.2	13.7	6
14.3	15.0	15.5	15.5	14.9	14.4	14.6	15.1	15.3	15.1	14.5	14.1	4
14.7	15.3	15.6	15.3	14.6	14.2	14.3	14.9	15.3	15.3	14.8	14.4	2
15.0	15.5	15.7	15.3	14.4	13.9	14.1	14.8	15.3	15.4	15.1	14.8	0
(b) Southern Hemisphere												
17.5	14.7	10.9	7.0	4.2	3.1	3.5	5.5	8.9	12.9	16.5	18.2	50
17.6	14.9	11.2	7.5	4.7	3.5	4.0	6.0	9.3	13.2	16.6	18.2	48
17.7	15.1	11.5	7.9	5.2	4.0	4.4	6.5	9.7	13.4	16.7	18.3	46
17.8	15.3	11.9	8.4	5.7	4.4	4.9	6.9	10.2	13.7	16.7	18.3	44
17.8	15.5	12.2	8.8	6.1	4.9	5.4	7.4	10.6	14.0	16.8	18.3	42
17.9	15.7	12.5	9.2	6.6	5.3	5.9	7.9	11.0	14.2	16.9	18.3	40
17.9	15.8	12.8	9.6	7.1	5.8	6.3	8.3	11.4	14.4	17.0	18.3	38
17.9	16.0	13.2	10.1	7.5	6.3	6.8	8.8	11.7	14.6	17.0	18.2	36
17.8	16.1	13.5	10.5	8.0	6.8	7.2	9.2	12.0	14.9	17.1	18.2	34
17.8	16.2	13.8	10.9	8.5	7.3	7.7	9.6	12.4	15.1	17.2	18.1	32
17.8	16.4	14.0	11.3	8.8	7.8	8.1	10.1	12.7	15.3	17.3	18.1	30
17.7	16.4	14.3	11.6	9.3	8.2	8.6	10.4	13.0	15.4	17.2	17.9	28
17.6	16.4	14.4	12.0	9.7	8.7	9.1	10.9	13.2	15.5	17.2	17.8	26
17.5	16.5	14.6	12.3	10.2	9.1	9.5	11.2	13.4	15.6	17.1	17.7	24
17.4	16.5	14.8	12.6	10.6	9.6	10.0	11.6	13.7	15.7	17.0	17.5	22
17.3	16.5	15.0	13.0	11.0	10.0	10.4	12.0	13.9	15.8	17.0	17.4	20
17.1	16.5	15.1	13.2	11.4	10.4	10.8	12.3	14.1	15.8	16.8	17.1	18
16.9	16.4	15.2	13.5	11.7	10.8	11.2	12.6	14.3	15.8	16.7	16.8	16
16.7	16.4	15.3	13.7	12.1	11.2	11.6	12.9	14.5	15.8	16.5	16.6	14
16.6	16.3	15.4	14.0	12.5	11.6	12.0	13.2	14.7	15.8	16.4	16.5	12
16.4	16.3	15.5	14.2	12.8	12.0	12.4	13.5	14.8	15.9	16.2	16.2	10
16.1	16.1	15.5	14.4	13.1	12.4	12.7	13.7	14.9	15.8	16.0	16.0	8
15.8	16.0	15.6	14.7	13.4	12.8	13.1	14.0	15.0	15.7	15.8	15.7	6
15.5	15.8	15.6	14.9	13.8	13.2	13.4	14.3	15.1	15.6	15.5	15.4	4
15.3	15.7	15.7	15.1	14.1	13.5	13.7	14.5	15.2	15.5	15.3	15.1	2
15.0	15.5	15.7	15.3	14.4	13.9	14.1	14.8	15.3	15.4	15.1	14.8	0

Fig. 6